REMARKS

Claims 5-9 is in this application. Claims 1-4 have been cancelled.

Claim 5 has been amended.. The text of steps c) and d) in claim 5 ha been revised. Therefore, it is respectfully requested that the rejections under 35 USC 112, second paragraph be withdrawn.

Claims 5-9 are rejected under 35 USC 103(a) as being unpatentable over Sharma, et al. (U.S. 6,541,193B2) in view of Wolf, et al. (J. *Neuroscience* **2002**, 22, 11-035-11044) and Faeldt, et al. (US 2004/0076583A1). This is respectfully traversed.

None of the references alone or in combination teach the claimed invention.

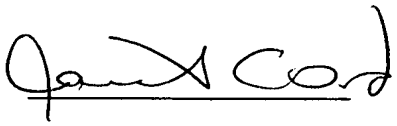
Sharma et al. discloses the steps of generating a double mutant line of K^+ channel genes in *Drosophilia melanogaster*, culturing the Sh^1 eag^1 mutant flies and anesthesizing the flies and determining the time for recovery from anesthesia. According to Sharma recovery from anesthesia is measured from the time a fly that had been immobile first stood up on its legs (see column 4, lines 1-6). Wolf like Sharma discloses the use of a drug e.g. ethanol that has a temporary and reversible effect on the flies. Even the passage cited by the Examiner supports this ("During continued exposure to a moderate dose [of ethanol], flies reduced their locomotor speed...Eventually, flies lost postural control and became immobile...these flies recovered when a stream of humidified air replaced ethanol vapor, demonstrating that immobile flies were sedated and not dead (pg. 11037, column 1)). While Faeldt discloses method for screening of a test agent in Drosophilia, the references in combination do not disclose nor suggest nor make obvious the claimed method for screening of neuroactive substance and the associated neural plasticity. None of the references disclose culturing flies with a media with a neuroactive drug, examining the locomotor activity of the flies, withdrawing the neuroactive drug and then again examining the locomotor activity to determine whether there is a long-lasting alteration in locomotion. In other words, none of the references either alone or in combination disclose or suggest a method for determining whether a drug is a neuroactive drug by measuring the effect on locomotion after first exposing the flies to the drug and then after no additional exposure to the drug wherein an alteration of locomotor activity compared to normally fed flies is indicative of neural plasticity e.g. a long term

effect.

Accordingly, it is respectfully requested that the rejection be withdrawn.

It is submitted that the present application is in condition for allowance and favorable consideration is respectfully requested.

Respectfully submitted,



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